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Regulation of TORC2 complex in Dictyostelium discoideum

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Stellingen behorende bij het proefschrift van Ankita Khanna

- 1) The heterotrimeric G proteins (chapter 5) and RasC (chapter 4) bind to distinct TORC2 components and are known to be involved in regulation of ACA activity. (Lim CJ *et al.*, (2001) EMBO J **20**: 4490-4499)
- 2) RasC and Rap1 control TORC2 activity through binding of distinct TORC2 components, TOR and RIP3, respectively. (Chapter 4)
- 3) Cells lacking any of the TORC2 components: *pia*, *lst8* or *rip3*, have strong chemotaxis defects, developmental defects and are unable to fully activate PKBA and PKBR1, thus, suggesting that all components are necessary to fully activate the complex. (Lee S *et al.*, (2005) Mol Biol Cell **16**: 4572-4583)
- 4) In life, be positive even if your blood group is not B +ve.
- 5) The signaling enzymes PI3K, TorC2, PLA2 and sGC are not required for Ras activation and chemotaxis to folate or to steep gradients of cAMP, but they provide a memory of direction and improved orientation of the cell, which together increase the sensitivity about 150-fold for chemotaxis in shallow cAMP gradients. (Kortholt *et al.*, (2011) EMBO Rep **12**: 1273-1279)
- 6) CNB (Cyclic Nucleotide Binding) domain of GbpD is a misnomer since it does not bind to cyclic nucleotides but binds to phospholipids instead. (Chapter 6)
- 7) A positive feedback loop of GbpD/Rap/PI3K/PIP3/GbpD is responsible for the very strong phenotype of GbpD^{O.E} (Chapter 6).
- 8) HC (High Caffeine) may be universally defined as the official minimal medium for PhD students.
- 9) TORC2 regulates chemotaxis in *Dictyostelium* via Rip3-Rap1 interaction. (Chapter 4)
- 10) Gezellig: Het woord omvat het hart van de Nederlandse cultuur, zoals de Nederlanders hebben de neiging om alle dingen te houden gezellig!